

U.S. Patent Application Serial No. 09/712,927
Amendment dated June 8, 2004
Reply to OA of **January 12, 2004**

IN THE CLAIMS

Please cancel claims 4, 12, 19 and 20 without prejudice or disclaimer.

Please amend claims 1-3, 5, 6, 9-11, 13 and 14 as follows:

Claim 1 (Currently Amended): A method for the formation of a color image which comprises the steps of forming an electrostatic latent image in accordance with an electrophotographic process, visualizing said electrostatic latent image by a developer transported by a developer support to form a multicolored toner image whereby monochromatic color toner images are formed by mutually independent developing steps comprising a contact type non-magnetic one-component developing method, and superposing then the resulting monochromatic toner images with one another to form a multicolored toner image, and in which method a toner used in each developing step contains an external additive which comprises inorganic fine particles having a mean particle diameter of 30 to 100 nm, said inorganic fine particles comprising particles of hydrophobic silica having a negative charge polarity, and fine particles having ~~an opposite~~ a positive charge polarity ~~to that of said inorganic fine particles~~, the addition amount of the external additive to a non-added toner containing no external additive is within the range of 1.5 to 10.0 parts by weight on the basis of 100 parts by weight of said non-added toner, and the aggregation degree of said toner is within the range of 30 to 80%, and the change ratio of the aggregation degree satisfies the following formula:

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$1.0 \leq (\text{initial aggregation degree})/(\text{aggregation degree after 20 hours of no-load revolution of developing roller used as the developer support}) \leq 1.2$; and
wherein said developer is a nonmagnetic one-component developer.

Claim 2 (Currently Amended): A color image formation method according to claim 1 wherein a mixture of first ~~inorganic~~ silica particles having a mean particle diameter of 30 to 100 nm and second ~~inorganic~~ silica particles having a mean particle diameter smaller than that of the first ~~inorganic~~ silica particles is used as said inorganic fine particles.

Claim 3 (Currently Amended): A color image formation method according to claim 1, wherein said fine particles having ~~an opposite~~ a positive charge polarity have a particle diameter within the range of 0.3 to 1.5 μm .

Claim 4 (Canceled).

Claim 5 (Currently Amended): A color image formation method according to claim ~~[[4]]~~ 1, wherein said inorganic fine particle have a primary particle diameter of 0.005 to 2 mm and the specific surface area, measured by the BET method, of 20 to 500 m^2/g .

Claim 6 (Currently Amended): A color image formation method according to claim 1 or 3, wherein said fine particles having ~~an opposite~~ a positive charge polarity are fine particles selected from the group consisting of polystyrene, copolymers of methacrylic acid ester and acrylic acid ester, polycondensates of silicone and benzoguanamine, nylon and thermosetting resins.

Claim 7 (Canceled).

Claim 8 (Original): A color image formation method according to claim 1, in which monochromatic toner image of yellow, magenta, cyan and black each is formed by the following steps:

- (1) charging step for imparting photosensitivity to an image support as an electrostatic recording medium;
- (2) exposing step of applying image formation exposure to the image support, and forming and recording an electrostatic latent image;
- (3) developing step of causing the electrostatic latent image recorded on the image support to electrically attract a developer, and physically visualizing the electrostatic latent image;
- (4) transferring step of serially transferring the visualized toner image on the image support to the recording medium, and superposing the visualized toner images with one another; and
- (5) image fixing step of heating and fixing the transferred image on the recording medium.

Claim 9 (Currently Amended): A method for the formation of a color image which comprises the steps of forming an electrostatic latent image in accordance with an electrophotographic process, visualizing said electrostatic latent image by a developer transported by a developer support to form a multicolored toner image whereby monochromatic color toner images are formed by mutually independent developing steps comprising a contact type non-magnetic one-component developing method, and then superposing the resulting monochromatic toner images with one another to form a multicolored toner image, and in which method a toner used in each developing step contains an external additive which comprises inorganic fine particles having a mean particle diameter of 30 to 100 nm, said inorganic fine particles comprising particles of hydrophobic silica having a negative charge polarity, and fine particles having ~~an opposite~~ a positive charge polarity to ~~that of said inorganic fine particles~~, the addition amount of the external additive to a non-added toner containing no external additive is within the range of 1.5 to 10.0 parts by weight on the basis of 100 parts by weight of said non-added toner, and the change ratio of the electrostatic charge amount of said toner on an image support for forming and visualizing said electrostatic latent image satisfies the following formula:

$1.0 \leq (\text{initial charge amount})/(\text{charge amount after 20 hours of no-load revolution of developing roller used as the developer support}) \leq 1.2$; and
wherein said developer is a nonmagnetic one-component developer.

Claim 10 (Currently Amended): a color image formation method according to claim 9,

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wherein a mixture of first ~~inorganic~~ silica particles having a mean particle diameter of 30 to 100 nm and second ~~inorganic~~ silica particles having a mean particle diameter smaller than that of the first ~~inorganic~~ silica particles is used as said inorganic fine particles.

Claim 11 (Currently Amended): A color image formation method according to claim 9, wherein said fine particles having ~~an opposite~~ a positive charge polarity have a particle diameter within the range of 0.3 to 1.5 μm .

Claim 12 (Canceled).

Claim 13 (Currently Amended): A color image formation method according to claim ~~12~~ 9, wherein said inorganic fine ~~particle~~ particles have a primary particle diameter of 0.005 to 2 mm and the specific surface area, measured by the BET method, of 20 to 500 m^2/g .

Claim 14 (Currently Amended): A color image formation method according to claim 9 or 11, wherein said ~~polymeric~~ fine particles are fine particles selected from the group consisting of polystyrene, copolymers of methacrylic acid ester and acrylic acid ester, polycondensates of silicone and benzoguanamine, nylon and thermosetting resins.

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Claim 15 (Canceled).

Claim 16 (Original): A color image formation method according to claim 9, in which monochromatic toner image of yellow, magenta, cyan and black each is formed by the following steps:

- (1) charging step for imparting photosensitivity to an image support as an electrostatic recording medium;
- (2) exposing step of applying image formation exposure to the image support, and forming and recording an electrostatic latent image;
- (3) developing step of causing the electrostatic latent image recorded on the image support to electrically attract a developer, and physically visualizing the electrostatic latent image;
- (4) transferring step of serially transferring the visualized toner image on the image support to the recording medium, and superposing the visualized toner images with one another; and
- (5) image fixing step of heating and fixing the transferred image on the recording medium.

Claims 17-20 (Canceled).